

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

Revisions to Parts 2 and 25 of the	)	
Commission's Rules to Govern the Use of	)	
Earth Stations Aboard Aircraft Communicating	)	IB Docket No. 12-376
with Fixed-Satellite Service Geostationary-	)	
Orbit Space Stations Operating in the 10.95-	)	
11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and	)	
14.0-14.5 GHz Frequency Bands	)	
	)	
Service Rules and Procedures to Govern the	)	
Use of Aeronautical Mobile Satellite Service	)	IB Docket No. 05-20
Earth Stations in Frequency Bands Allocated	)	(proceeding terminated)
to the Fixed Satellite Service	)	

**COMMENTS OF  
THE GLOBAL VSAT FORUM**

The Global VSAT Forum ("GVF") respectfully submits these comments in response to the above-referenced proceeding regarding the establishment of the Earth Stations Aboard Aircraft ("ESAA") service.<sup>1</sup> GVF is the leading voice of the international satellite community. It comprises more than 200 members from every major region of the world and from every sector of the industry, including satellite operators, manufacturers, system integrators, and other service providers. The Commission's action on ESAA has a direct impact on GVF members, many of whom are prominent United States companies.

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<sup>1</sup> *Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands, IB Docket No. 12-376, Notice of Proposed Rulemaking and Report and Order, FCC 12-161 (Dec. 28, 2012) ("ESAA Order").*

The satellite in-flight broadband industry has grown tremendously under the Commission's regulatory leadership. GVF applauds the Commission for authorizing ESAA within its existing two-degree spacing framework and for adopting well-considered service rules that recognize ESAA as the long-awaited third leg of the mobile Fixed Satellite Service ("FSS") triad. At this time, however, ESAA remains a secondary service in the critical Earth-to-space uplink band. There is no reason, however, why ESAAs should not enjoy primary status in the same way that Earth Stations aboard Vessels ("ESV") and Vehicle Mounted Earth Stations ("VMES") have primary status. ESAA networks have operated successfully for more than a decade without causing any more interference or constraint on traditional FSS earth stations than ESV or VMES. This should not be surprising as the rules developed for ESAA, ESV and VMES are simply applications of the Commission's long-standing two-degree spacing framework to new technologies. Primary status for ESAA in the 14.0-14.5 GHz (Earth-to-space) band is therefore entirely appropriate.

Equally important, the decisions of the Commission have significant influence on the regulatory bodies of other administrations around the world. Therefore, elevation of ESAA to co-primary status as an application of the FSS in the 14.0-14.5 GHz band would send an important signal that ESAA is a full member of the mobile triad that already includes VMES and ESV, and could smooth the way for worldwide adoption of similar allocations. This would benefit U.S. competitiveness as U.S. manufacturers, airlines, and satellite service providers continue to be the dominant players in the in-flight broadband marketplace. GVF therefore urges the Commission to adopt promptly its proposal to elevate ESAA as an application of the FSS to primary status in the 14.0-14.5 GHz band.

## **I. THE COMMISSION HAS BEEN A REGULATORY LEADER IN THE HISTORY OF ESAA**

What is now ESAA has been developing since the Commission granted its first authorization for a U.S. company to operate satellite transmit and receive earth stations aboard aircraft in the Ku-band using the 12 GHz band for downlink and the 14 GHz band for uplink.<sup>2</sup> Other companies in the aviation industry also developed satellite-based in-flight broadband technologies and, through this leadership, the United States became an early worldwide leader in providing broadband aboard aircraft to airlines around the world, including to All Nippon Airlines, Japan Airlines, SAS, Singapore Airlines, and Lufthansa.<sup>3</sup>

To facilitate the ability of U.S. companies to offer satellite in-flight broadband globally, the Commission's World Radiocommunication Conference 2003 ("WRC-03") Advisory Committee advocated a modification of the secondary allocation for the mobile-satellite service ("MSS") at 14.0-14.5 GHz to include aeronautical mobile-satellite service ("AMSS").<sup>4</sup> In turn, the U.S. delegation to the WRC-03 pressed for an international allocation for AMSS in the 14.0-

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<sup>2</sup> *Boeing Company Application for Blanket Authority to Operate Up to Eight Hundred Technically Identical Transmit and Receive Mobile Earth Stations Aboard Aircraft in the 14.0-14.5 GHz and 11.7-12.2 GHz Frequency Bands*, Order and Authorization, 16 FCC Rcd 22645 (International Bureau and Office of Engineering and Technology, 2001) ("*Boeing Transmit-Receive Order*").

<sup>3</sup> *See Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket No. 05-20, Notice of Proposed Rulemaking, FCC 05-14, ¶ 5 n.22 (Feb. 9, 2005).

<sup>4</sup> *See The FCC's Advisory Committee for the 2003 World Radiocommunication Conference Proposes Preliminary Views of WRC-03 Issues*, Public Notice, DA 01-1092 at 19 (Informal Working Group 3 (IWG-3), WRC-03 Advisory Committee, Draft Preliminary View, Agenda Item 1.11).

14.5 GHz band.<sup>5</sup> Largely as a result of U.S. efforts, the International Telecommunication Union (“ITU”) adopted Recommendation M.1643, eliminating the language that had excepted AMSS from a secondary allocation for MSS in the 14.0-14.5 GHz band.<sup>6</sup> As the ITU noted, adoption of a common allocation and operational requirements was necessary because aircraft earth stations would operate internationally, potentially being subject to numerous national and international rules.<sup>7</sup> The U.S. delegation to WRC-03 considered this decision to be a major success, noting that adoption was “vital for U.S. aerospace and communications companies.”<sup>8</sup> Conversely, “failure to allocate spectrum globally for this use would ultimately make it an impractical service to provide, since each country would have to make an affirmative finding to allow such use, given that it was not consistent with the ITU’s Radio Regulations.”<sup>9</sup> Thus, United States industry has driven the development of ESAA, and the Commission has provided regulatory leadership crucial to the expansion of this service worldwide.

## **II. PRIMARY STATUS FOR ESAA IS APPROPRIATE**

Today, with the release of the ESAA Order, the satellite in-flight broadband industry is once again at a cusp. Elevation of ESAA to primary status, alongside ESV and VMES will

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<sup>5</sup> United States Delegation Report, World Radiocommunication Conference 2003 at 5 (December 8, 2003) (available at [www.fcc.gov/wrc-07/docs/WRC03DelReport\\_final.doc](http://www.fcc.gov/wrc-07/docs/WRC03DelReport_final.doc)) (“WRC-03 Report”).

<sup>6</sup> Recommendation ITU-R M.1643, Technical and operational requirements for aircraft earth stations of aeronautical mobile-satellite service including those using fixed-satellite service network transponders in the band 14-14.5 GHz (Earth-to-space) (2003).

<sup>7</sup> *Id.* at 1.

<sup>8</sup> *WRC-03 Report* at 5.

<sup>9</sup> Abernathy, Kathleen Q., *Why the World Radiocommunication Conference Continues to be Relevant Today*, FED. COMM. L. J., Vol. 56: Iss. 2, Article 2 (2004) (available at <http://www.repository.law.indiana.edu/fclj/vol56/iss2/2296>).

accelerate investment and innovation in this fast-growing segment of the satellite industry. There is no technical reason why ESAA should be treated differently from ESV and VMES, or more traditional FSS earth stations. They are subject to essentially the same off-axis EIRP density limits and coordination processes as, and do not require any more interference protection than, the primary services already operating in the band. Not surprisingly, ESAA networks have operated for the last decade under this framework without incident.

The Commission has acknowledged that ESAA, ESV and VMES are essentially applications for the same technology, choosing a naming scheme that emphasizes their similarity.<sup>10</sup> Moreover, the Commission has noted in the case of ESV and VMES that inter-system coordination among FSS operators would be facilitated if these services were considered co-primary.<sup>11</sup> The same holds true for ESAA. For all of these reasons, and as the “third leg” of the triad of FSS mobility applications, ESAA should have regulatory parity with ESV and VMES.

### **III. ELEVATION OF ESAA TO FULL PRIMARY STATUS WILL PROVIDE A VALUABLE PRECEDENT FOR FOREIGN ADMINISTRATIONS**

In addition to creating regulatory certainty for U.S. operators, Commission action would send an important signal to its counterparts abroad that primary status is appropriate for ESAA. Many administrations, including the United States, have permitted satellite in-flight broadband

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<sup>10</sup> *ESAA Order*, ¶¶ 7-8.

<sup>11</sup> *See Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in the 5925-6425 MHz/3700-4200 MHz Bands and 14.0-14.5 GHz Bands*, IB Docket No. 02-10, Report and Order, FCC 06-286, 706, ¶ 78 (2005) (“*ESV Order*”); *Amendment of Parts 2 and 25 of the Commission's Rules to Allocate Spectrum and Adopt Service Rules and Procedures to Govern the Use of Vehicle-Mounted Earth Stations in Certain Frequency Bands Allocated to the Fixed-Satellite Service*, IB Docket No. 07-10, Report and Order, FCC 09-64, ¶ 8 (rel. July 31, 2009) (“*VMES Order*”).

on a relatively ad-hoc basis. In order to formalize the regulatory status of in-flight broadband, other administrations are likely to look to the Commission's ESAA proceeding as an impetus and model for the adoption of similar rules. Indeed, the Commission regularly consults the technical rules and practices of other countries for guidance in adopting and reforming its rules,<sup>12</sup> and has acknowledged that sharing its "recognized expertise" in telecommunications can assist in developing well-considered regulatory environments in other countries.<sup>13</sup> This makes it essential that the Commission promptly adopt full primary status, including in the 14.0-14.5 GHz (Earth-to-space) band, to provide a complete and coherent model for the Commission's counterparts abroad in both established and developing markets.

Commission leadership on this issue is especially important as United States companies remain at the forefront of the development, manufacture, and operation of ESAA systems. The accelerated growth and streamlined regulatory process prompted by adoption of similar service rules worldwide would strongly benefit the companies that provide these services, promoting continued investment and maintaining United States leadership in this growing industry.

#### **IV. CONCLUSION**

The United States has traditionally been a leader in both technological and regulatory innovation, and the adoption of ESAA service rules continues this trend. To fully realize the potential of ESAA, and to provide a model for foreign administrations abroad, the Commission

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<sup>12</sup> See e.g. *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Notice of Proposed Rulemaking, IB Docket Nos. 12-267, FCC 12-117 (rel. Sept. 28, 2012) ("*Part 25 Review NPRM*").

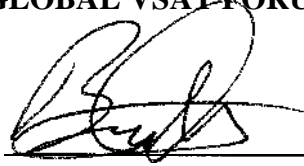
<sup>13</sup> See e.g. FCC Launches New Initiative to Promote Pro-Competitive Regulatory Policies in Developing Countries, News Release (June 2, 1999) (announcing the release of *Connecting the Globe, A Regulator's Guide to Building a Global Information Community*).

should ensure that ESAA is fully co-primary with other services in the 14.0-14.5 GHz band. GVF therefore urges the Commission to adopt its proposal to elevate ESAA as an application of the FSS to primary status in the 14.0-14.5 GHz band as soon as possible.

Respectfully submitted,

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